

REMARKS

Responsive the restriction requirement, applicants provisionally elect Group I, claims 27-32 and 45, drawn to a protected functionalized carbon nanotube, with traverse.

Responsive to the election of species requirement, applicants provisionally elect compound VII (illustrated in claim 42), with traverse. This compound corresponds to the general formula (I) wherein $R'=H$, $R=-M-Y-Z_a-P_b$, and wherein M is a spacer group- $(CH_2-CH_2-O)_2-CH_2-CH_2-$, $a=b=0$, Y is reactive group (NH_2) capped with tert-butyloxycarbonyl group (Boc), thus $Y=NHBoc$.

The traversal is made in order to rejoin groups I, II, VI and VIII.

The position held by the Official Action is that the listed invention groups lack a common technical feature. The Official Action considered that the common technical feature linking the, invention groups is: "A functionalized carbon nanotube, with homogeneously surface substituted reactive groups being substantially intact and soluble in organic and/or aqueous solvents", is not a contribution over the prior art as it is considered to be disclosed in the document FISHER et al. US 6,203,814 B1 ("FISHER").

Applicants do not agree with this consideration for the following reasons:

1. Solubility

As it has been quoted by the Official Action, "...soluble in organic and/or aqueous solvents" is an important feature of the present invention, and it is not described by FISHER.

FISHER does not teach that the disclosed fibrils are soluble in a solvent. It is quoted by the Official Action: "Such processing may include dispersing the fibrils in a solvent" (col 8, line 14). "Dispersing" refers to a suspension in a solvent, and, thus, the fibrils described are not soluble.

Other elements that prove that the fibrils are not soluble can be found in the description:

"...carbon fibrils may be filtered..." (i.e., col 8 line 16, col 12 line 47, col 13 line 13),

"A fibril slurry" (i.e., col 9 line 4, col 12 line 45, col 12 line 65, col 13 line 12, col 14 line 14),

"The solids were filtered" (i.e., col 9 line 8, col 19 line 18).

FISHER does not disclose a soluble carbon nanotube. Thus, the technical feature of the present invention is not disclosed in the prior art.

2. Intact structure

As it has been quoted in the Official Action, "... being substantially intact..." is an important feature of the present invention, and it is not described by FISHER.

The fibrils disclosed in FISHER have defect sites (col 5 line 25). These defect sites are shown in the general formula $[C_nH_L][R_m]$, where n is an integer L is a number less than $0.1n$, m is a number less than $0.5n$ (col 4 line 28). $[R_m]$ represents the substitution on the carbon nanotube, $[C_nH_L]$ is the formula of the carbon nanotube backbone.

In a flawless carbon nanotube, such backbones are constituted only by sp^2 carbon atoms. Hydrogen indicates that there is a defect site in the backbone, and such defects are tolerated to a huge extent as can be seen by the proportion of hydrogen with respect to the carbon atoms (up to 0.1).

FISHER does not disclose an intact carbon nanotube, thus the technical feature of the present invention is not disclosed in the prior art.

For these reasons, Applicants respectfully submits that the common technical feature of the present application was not disclosed, and, thus, the unity of the subject matter of the invention should be acknowledged.

In view of the foregoing remarks, a favorable action on the merits of all claims from groups I, II, VI and VIII is respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON



Robert A. Madsen, Reg. No. 58,543
209 Madison Street, Suite 500
Alexandria, VA 22314
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

RAM/jr